

CONFIDENTIAL

25X1

31 October 1955

25X1

Subject: H-2061

Dear Sir:

A meeting was held on 25 October 1955 and 26 October 1955 between the contractor's representative, [] and [] representatives for the purposes of discussing progress to date and stabilize more of the specifications.

25X1

Regarding D.F. sensing accuracy, it was stated that quadrant sensing will be acceptable, ie. $\pm 45^\circ$, for bands 3 to 9 inclusive. However, it was felt that the system was capable of greater accuracy than this and every effort will be made to obtain the maximum accuracy consistent with the time available and the equipment component limitations. For bands 1 and 2 port and starboard sensing will be acceptable in the event [] cannot design and build antennas for these bands of reasonable physical size. Every effort will also be made to obtain quadrant sensing of the maximum accuracy for bands 1 and 2.

25X1

At present, [] is testing a system of crossed dipoles and reflectors for bands 1 and 2. Conical helices are planned for bands 3 and 4. Comparative tests will be made on bands 5, 6 and 7 between NRL horns and conical helices; constancy of pattern being in favor of the helices. Electroformed NRL horns will be used for bands 8 and 9. A GLC "L" band horn is being awaited for comparison tests on band 5.

25X1

From present indications the use of a compass repeater or a navigation clock is not contemplated as auxiliary equipment to the console unit.

It is desired that the output level for recording purposes be 1 milliwatt across a 600 ohm load.

The concept of output connectors has been changed to that of the following table:

On a per band basis:

A recording output for each antenna signal - 4 required
A combined Tektronix oscilloscope presentation output - 1 required.

25X1

CONFIDENTIAL

~~CONFIDENTIAL~~

In an equipment basis:

- 36 recording outputs
- 9 oscilloscope outputs
- 1 switched (9 position) oscilloscope output
- 1 switched (9 position) phone output
- 1 camera actuate output

Total per equipment: 48 outputs

The problem of the antenna mounting structure was discussed. It was felt that shock requirements for an erectable mast would be too severe in this application, however, this decision will be delayed pending information from the operations personnel. Presently, the antenna will be designed to mount on a small fixed pedestal-like structure. It is anticipated however, that nearby structures will distort the antenna patterns. Therefore, it is very much desirable to erect this antenna so as to clear any nearby structures.

A proposal for system testing and calibration is to be submitted to [redacted]. Basically, the method is along the present system they are using on their Signal Corps work and makes use of the impulse generating equipment manufactured by Stoddart of Hollywood, Calif.

25X1

The use of filters for bands 1 to 7 inclusive was again discussed. The advantages for the use of filters with this equipment now is great, especially when considering the need for a later repackaging job and a system recalibration job. At the present time filters can be designed into the system very easily. A decision for filters at a time when the antenna packaging design is completed would be undesirable, considering the mechanical problems of cabling and pre-amplifier mounting.

Tests are continuing on the 750 KC and 4 Mc pre-amplifier unit to evaluate the transient performance. Design calculations show that the 12 Mc pre-amplifier may be feasible with 6L508 transistors providing that suitable feedback means can be found to make a gain-bandwidth trade.

Tests are continuing on the high voltage power supply unit with the promise of the required output with the use of silicon junction diodes in place of the selenium rectifier.

A decision has been made to design the console unit with a sloping front panel. The nine indicator units will be designed for plug-in use and for universality as to replacement on any of the nine bands.

Very truly yours

25X1

sf
cc:

25X1

~~CONFIDENTIAL~~